HERE'S WHAT THE ADC-1 AND YOUR COMPUTER CAN DO FOR YOU:

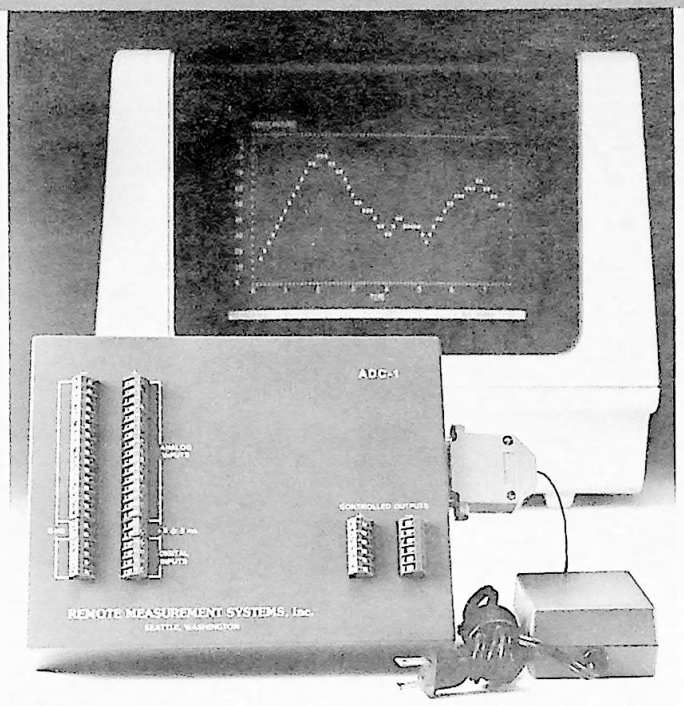
Enable you to collect analog data from your environment. Variable conditions such as temperature, energy consumption and light intensity can be routinely monitored from sensors that emit analog signals. These signals are then converted to digital values by a 12-bit analog-to-digital (A/D) converter.

Help you gather and measure digital information from your surroundings. For example, signals from security system sensors or optical encoders can be relayed to the computer via the ADC-1 digital inputs.

Let you use your personal computer to evaluate this data and react by directing the ADC-1 to control external devices. The six direct-wire controlled outputs are used to activate solid state relays or other low voltage electronic equipment. In addition, lamps, appliances and other AC-powered devices can easily be controlled by the ADC-1 through its line carrier transmitter. Remote control modules are inserted between the device and the AC outlet and are activated through codes sent over the household wiring by the ADC-1.

Permit you to employ one system for home, office and laboratory. Unlike many peripherals which are designed to work only with a certain machine or operating system, the ADC-1 is truly portable, it will operate with any personal computer that has an RS-232 serial port. While your computer system needs may vary with the tasks you wish to accomplish in either the home or office, you only need one type of data acquisition and control system—the ADC-1 from Remote Measurement Systems. Since the ADC-1 is not computer specific, it can be used with your next computer if you decide to upgrade your system.

Provide more application flexibility. RS-232 compatibility allows you to connect the ADC-1 directly with a modem for remote site data collection, thus broadening your potential uses for the system. Positioning the ADC-1 remotely from the computer also reduces sensor lead lengths.



TAKE CONTROL WITH THE

ADC-1

The Measurement, Monitoring and Control System

The ADC-1 from Remote Measurement Systems is a sophisticated yet easy-to-operate data acquisition and control system designed for use with personal computers.

It expands the functions of the personal computer by combining high resolution measurement capabilities with the ability to control external devices. Designed as a peripheral unit, the ADC-1 allows you to link a wide array of sensors with your computer to gather both analog and digital information from the environment.

By attaching control modules to the computer, the ADC-1 lets you use the computer for scientific data collection, process control and energy management tasks—without requiring extensive electronics experience or great expense.

This system can be used with any personal computer with an RS-232 serial interface.

Allow you to operate under a variety of program languages. The ADC-1 runs under any language that controls an RS-232 serial port, including BASIC, FORTRAN, Forth, Pascal and assembly language. A BASIC program to read inputs, control outputs and plot data on a terminal is listed in the ADC-1 owner's manual. Specific implementation instructions are included for the Apple,® Osborne,® Atari,® Commodore,® Northstar,® Epson,® Radio Shack,® and IBM-PC® computers.

Let you use a simple command structure to monitor, measure and control simultaneously. Commands to the ADC-1 are initiated by transmission of a single 8-bit byte through the serial port. (Hardware handshaking is not required.) For each byte transmitted, the ADC-1 returns an 8-bit byte which provides status and measurement data. Since each section of the ADC-1 functions independently, it may continue to control direct wire outputs or monitor digital inputs while the A/D converter or line carrier transmitter is busy.

Give you the best system available for a personal computer. The ADC-1 from Remote Measurement Systems gives you everything you need in a data acquisition and control system. The versatile ADC-1 contains both the analog-to-digital and control capabilities required to perform such tasks—at surprisingly low cost. While data acquisition and control systems have been used in industry for many years, traditionally they have been tied to larger, more costly computers. Now Remote Measurement Systems gives you an excellent alternative—a flexible yet moderately-priced system that runs on the personal computer.

Can you afford to wait any longer for the superior data acquisition and control system? Order your ADC-1 today from Remote Measurement Systems.

REMOTE MEASUREMENT SYSTEMS, INC.

ADC-1 FEATURES AND SPECIFICATIONS

16 Analog to Digital Inputs
- ► Integrating dual slope A/D with conversion at 14 Hz. (100 Hz. with clock speed jumper and two capacitor changes)
- ► 12 bit (plus sign) A/D provides resolution of one part in 8192 (0.1 mV sensitivity).
- ► Input Range is ± 0.4 volts (modifiable to ± 2.0 volts)
- ► Optional instrumentation amplifier allows microvolt sensitivity for one bank of 8 inputs.
- ► Onboard temperature sensor for use with thermocouples.

4 Digital Inputs
- ► 2 modes—toggle or latched
- ► Maximum sample rate @ 9600 baud is 400 Hz.
- ► Functions for both normally open and normally closed circuits.

AC Line Carrier Remote Device Control
- ► Sends signals over normal household/office AC wiring to control 32 independent devices using BSR, Leviton, Sears or Radio Shack remote control modules.
- ► 8 house codes are switch selectable to reach 256 possible units.

6 Direct Wire Digital Ouputs
- ► Latched TTL levels with maximum current of 50 mA.
- ► Connect directly to solid state relays.

Attaches to the RS-232 or serial interface of most computers or modems.
- ► 6 user-selectable baud rates—300, 600, 1200, 2400, 4800, 9600.
- ► Uses three wires from standard DB-25 connector for easy installation on your system.
- ► Word length—8 bits; 1 or 2 stop bits.
- ► Additional units—For applications where 16 analog inputs are not sufficient, multiple ADC-1 units may be connected to the same RS-232 serial port and selected with an enable line.

Software
- ► The Owner's Manual contains listings of the four subroutines needed to operate all ADC-1 features. These subroutines are written in BASIC, are less than 20 lines in length, and are easily incorporated into your applications program.
- ► Specific interconnection instructions and subroutines are included for IBM-PC, Apple, Osborne, Atari, Commodore, Northstar, Epson, Victor and Radio Shack computers.

Dimensions
- ► Desktop unit—8×7×2 inches, aluminum enclosure.
- ► AC signal transmitter—3.5×2.5×1.5 inches.

Weight
- ► 3 lbs.

System Requirements
- ► RS-232 serial port.
- ► Personal computer—(Since the ADC-1 does not contain a microprocessor, it is controlled by the computer to which it is attached.)

Power
- ► CMOS technology is used throughout for current consumption of less than 20mA @ 5 v. or 35mA @ 12 v; requires power to be supplied by host computer.

Sensor Installation
- ► The ADC-1 comes with a terminal strip that requires only a screwdriver for easy connection of sensors.

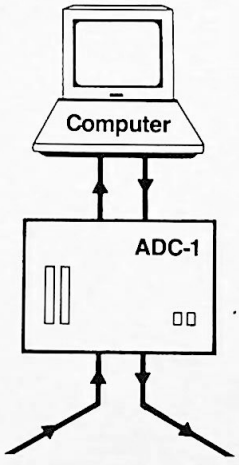
ADC-1 USER APPLICATIONS

- ► Measure the electrical energy consumption of your home or appliances. If consumption exceeds a specific limit, your computer can alert you or even automatically reduce the load. The price of the system could be paid for in a short time via lower electrical bills. Compare our price with a commercial wattmeter!

- ► Connect your security system to the ADC-1 for sophisticated alarm responses. It can activate specific lights or a siren in a pattern that reflects the location and magnitude of the intrusion.

- ► Operate a remote cabin from your primary residence. In seconds, via the telephone and a modem, you will know the status of the doors, windows, river level, and weather at your second home. Turn the furnace on before you plan on arriving!

- ► Monitor soil moisture of indoor plants and outdoor gardens. Use your computer to control garden watering or irrigation systems.



Inputs	Outputs
Security	Siren
Light	Lamp
Energy	Heater
Moisture	Pump/Valve
Temperature	Air Conditioner

Uses limited only by your imagination.

- ► Collect data and control scientific experiments in the laboratory. The ADC-1 offers low power consumption, small size and modem connection capability—features that make it ideal for remote site data collection.

- ► Build your own weather station with data storage and graphic displays of temperature, wind speed, pressure, and rainfall.

- ► Teach your students how computers are used in measuring and controlling processes in industry and let them invent their own uses in the school or home.

- ► Experiment with robotics sensors and motor control.

- ► Use the ADC-1 to control a star-tracker for your telescope or rotate solar panels to follow the sun (adds 35% to energy collected).

For pricing and ordering information contact:
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(206) 525-3369